

costs. In the US, the family members' aggregate productivity loss was estimated at \$3.3 billion. Spouses of prostate cancer patients were found to have incurred \$1,309 in lost productivity. Spouses' aggregate productivity loss was estimated at \$1.3 billion. Sensitivity analysis of the aggregated US estimates revealed that the total lost productivity of family members as a result of prostate cancer ranged from \$2.2 billion to \$4.6 billion. For spouses of prostate cancer patients, the results of the sensitivity analysis ranged from \$0.9 billion to \$1.7 billion. **CONCLUSIONS:** These findings indicate that prostate cancer has a significant impact on work productivity of prostate cancer patients' families and spouses. However, there are few resources available to assist prostate cancer patients and families in dealing with the disease from a psychosocial aspect. Research is warranted to further assess the negative effects of prostate cancer on families.

## PCN46

## STANDARD TREATMENT COST OF BREAST CANCER WITH DIFFERENT TNM STAGE AMONG WESTERN CHINESE WOMEN

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**OBJECTIVES:** To obtain the standard treatment cost of female breast cancer with different TNM Stage. **METHODS:** The treatment cost of female breast cancer consisted of direct medical expenditure, direct non-medical expenditure, and indirect expenditure. Extracting previous data, calculating by clinical pathway, face-to-face interviewing, and telephone interviewing were adopted to estimate the treatment cost of female breast cancer; ANOVA and SNK were performed to detect the significantly differences in treatment cost with different TNM stages. **RESULTS:** Direct medical expenditure was extracted from medical record and expense statement of 316 breast cancer cases in Sichuan Cancer Hospital; direct non-medical expenditure was investigated from 59 patients and their relatives; indirect expenditure was surveyed from 94 cases who received surgery more than one year ago. The average treatment cost of female breast cancer was RMB154,658 (US\$24,854), which was adjusted by the proportions of ER, PR, and menses status of patients. The range of treatment cost from TNM 0 stage to TNM IV stage is RMB37,608-RMB207,824 (US\$6,044-US\$33,397). Breast cancer cases with early stage had considerably lower treatment cost than those with advanced stage. **CONCLUSIONS:** Early detection and treatment of breast cancer may have a real economic significance for reducing the burden of disease.

## PCN47

## THE IMPACT OF PROSTATE CANCER ON QUALITY OF LIFE

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**OBJECTIVES:** Studies have shown that men diagnosed with metastatic prostate cancer report significantly reduced quality of life (QoL) and have higher levels of depression and anxiety than men with localized prostate cancer. The present study assessed the impact of prostate cancer on health-related QoL compared to individuals without prostate cancer. **METHODS:** Using 1996-2009 data from the Medical Expenditure Panel Survey (MEPS), multivariate analyses were performed on three health status measures: 1) EuroQol EQ-5D, 2) Short Form (SF)-12 Health Survey, 3) Self-reported health status. All men age 40 and older with International Classification of Disease Codes, 9<sup>th</sup> revision of 185 were identified. **RESULTS:** The MEPS database included 1,399 patients with prostate cancer. Mean age was 72 years, and 71% were Caucasian. The EQ-5D results indicated that QoL was 5% lower for prostate cancer patients than individuals without prostate cancer (0.76 vs. 0.80,  $p < 0.001$ ). Results of the SF-12 Physical Health Composite Scores (PCS) indicated that prostate cancer patients scored lower than individuals without prostate cancer (44.6 vs. 46.3 [population norm = 50],  $p < 0.001$ ). Prostate cancer patients also rated themselves 12% lower on the self-reported physical health status than individuals without prostate cancer (0.69 vs. 0.78,  $p < 0.001$ ). There was no significant difference in mental health of prostate cancer patients as measured by the SF-12 Mental Health Composite Score or self-reported mental health status. **CONCLUSIONS:** These findings indicate that prostate cancer has a significant negative effect on physical health as measured by the EQ-5D, the SF-12 PCS, and patient self-report. Prostate cancer had no discernible effect on patients' mental health. Further research on the effects of disease severity on QoL is warranted as literature indicates that there are few psychosocial interventions for patients with advanced disease.

## PCN48

## COST ANALYSIS OF SKELETAL RELATED EVENTS AMONG ELDERLY MEN WITH STAGE IV METASTATIC PROSTATE CANCER IN SEER-MEDICARE

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**OBJECTIVES:** Patients diagnosed with metastatic (M1) prostate cancer (PCa) are predisposed to skeletal related events (SREs), including bone surgery (BS), pathologic fracture (PF) and spinal cord compression (SCC). There is limited information regarding the change in costs associated with SREs, by type, among stage IV M1 PCa patients. **METHODS:** We analyzed patients aged 66+ with an (AJCC) M1 PCa diagnosis. Cases diagnosed between 2000 and 2007 were identified from the Surveillance, Epidemiology, and End Results (SEER)-Medicare dataset. Patients were followed until death or censoring. Incremental costs per patient were calculated for the 12-month pre-period and the 12-month post-period relative to the first post-diagnosis SRE. Results were reported as the average percent change in the total pre-post period costs. Subgroup analysis was carried out separately for individuals who survived (survivors) and died (non-survivors)

within the 12-month post-period. A sensitivity analysis was carried out for a 6-month pre-post interval. The analysis was conducted from a US Medicare system perspective. **RESULTS:** Application of inclusion criteria resulted in 1,234 stage IV M1, PCa patients with SREs. The average age was 78 years and 11% were African American. Five, mutually exclusive SRE groups were evaluated: PF-only ( $n=180$ ), SCC-only ( $n=634$ ), BS-only ( $n=200$ ), PF with BS ( $n=163$ ), SCC with BS ( $n=57$ ). The average percent increase in the total costs in the post-period compared to the pre-period was 67%. The average percent increases in costs for each of the subgroups were as follows: PF-only, 53%; PF with BS, 71%; SCC-only, 64%; SCC with BS, 88%; and BS-only, 70%. Subgroup analysis showed a 77% increase in total costs among survivors and a 60% increase in costs among non-survivors. The average percent increase in SRE costs using a pre-post period of 6 months was 75%. **CONCLUSIONS:** The percentage increase in costs post-SRE varies by type of SRE, survival post-SRE, and interval length.

## PCN49

## COST OF METASTATIC CASTRATION-RESISTANT PROSTATE CANCER IN THE UNITED STATES

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**OBJECTIVES:** Costs for the population of metastatic castrate-resistant prostate cancer (mCRPC) patients can be difficult to discern due to the lack of a specific International Classification of Diseases, 9th Revision (ICD-9) code. This study described the resource utilization and costs of patients with mCRPC in a large US health claims database using chemotherapy administration as a proxy. **METHODS:** Data from January 1, 2006-June 30, 2011 from the MarketScan Commercial and Medicare databases were used in this analysis. Index date was defined as the first docetaxel, mitoxantrone, estramustine, vinorelbine, cabazitaxel or abiraterone treatment date between January 1, 2007 and June 30, 2010. Additional inclusion criteria:  $\geq 18$  years old; continuous pharmaceutical and medical enrollment  $\geq 6$  months prior to and  $\geq 2$  months following the index date;  $\geq 1$  ICD-9 diagnosis code for prostate cancer (185.x). mCRPC related costs were identified by the presence of an ICD-9 code of 185.x on the claim. Costs were estimated separately for chemotherapy, radiation, inpatient, outpatient and emergency room (ER). Median per patient per month (PPPM) costs were calculated at the patient level. **RESULTS:** 4,005 patients were eligible, with a mean age of 70.2 years. For patients with medical utilization, total median PPPM costs increased from \$3,107 pre-index to \$6,939 post-index. Chemotherapy costs increased (\$234 pre-index vs. \$1,439 post-index), while radiation costs decreased (\$793 vs. \$394). Excluding costs related to chemotherapy, radiation and other drug treatment, costs for inpatient, outpatient and ER visits increased from \$2,120 pre-index to \$4,388 post-index. Both mCRPC-related costs (\$862 vs. \$1,986) and non-mCRPC-related costs (\$763 vs. \$1,628) rose. **CONCLUSIONS:** These findings indicate that the cost burden from mCRPC is quite large. With aging of the population, prevalence of prostate cancer is expected to increase to 3.2 million in the US by 2020 with costs continuing to escalate. Further research is needed to understand these cost implications, especially for the Medicare system.

## PCN50

## ASSESSING THE CLINICAL AND ECONOMIC BURDEN OF PROSTATE CANCER IN THE VETERAN POPULATION IN THE UNITED STATES

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**OBJECTIVES:** To assess the clinical burden, health care utilization, and cost patterns of prostate cancer patients in the U.S. veteran population. **METHODS:** A retrospective database analysis was performed using the Veterans Health Administration (VHA) Medical SAS Datasets from October 1, 2005 to May 31, 2012. All U.S. veteran beneficiaries diagnosed with prostate cancer were identified using International Classification of Disease 9<sup>th</sup> Revision Clinical Modification (ICD-9-CM) diagnosis code 185.xx. Descriptive statistics were calculated as means  $\pm$  standard deviation (SD) and percentages to measure clinical, cost, and utilization distribution in the sample. The most common comorbidities and treatment medications for prostate cancer patients were also examined. **RESULTS:** Among all study patients diagnosed with prostate cancer ( $n=251,890$ ), the most common comorbidities were hypertension ( $n=69,534$ , 27.60%), elevated prostate-specific antigen (PSA) levels ( $n=45,498$ , 18.06%), and diabetes ( $n=34,171$ , 13.57%). The most common treatment medications prescribed for prostate cancer patients were simvastatin ( $n=71,263$ , 28.29%), omeprazole ( $n=34,185$ , 13.57%) and terazosin hydrochloride ( $n=22,639$ , 8.99%). A total of 117,599 (46.69%) patients had PSA test results, with an average result of 14.26. Percentages of inpatient (12.89%), emergency room (ER) (13.12%), physician office (99.86%), outpatient visits (99.87%), and pharmacy visits (90.34%) were calculated. Patient expenditures were found to be \$4,227 (SD=\$28,254) for inpatient, \$146 (SD=\$582) for ER, \$6,469 (SD=\$11,387) for physician office, \$6,781 (SD=\$11,837) for outpatient visits and \$1,247 (SD=\$4,159) for pharmacy visits. **CONCLUSIONS:** PSA laboratory test results should be considered when evaluating disease severity and progression of prostate cancer. However, the effects of prescribed medications on those test results should always be considered when interpreting laboratory results.

## PCN51

## THE ECONOMIC BURDEN OF CANCER SURVIVORSHIP AMONG ADULTS IN THE UNITED STATES

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